

ABSTRACT

To prevent unintended switching of a gain and generation of a wrong discrimination level at the time when there is a transient response in a light signal, in an optical receiver that receives a burst-like light signal, the optical receiver includes a pre-amplifying unit that performs voltage conversion and amplification of an output of a light-receiving element to that receives a light signal and converts the light signal into a current signal and a regenerating unit including a discriminating circuit that receives an output signal of the pre-amplifying unit as an input signal and performs a signal discrimination of the input signal based on a threshold generated based on the input signal. The pre-amplifying unit includes a first average detecting circuit that detects an average of output signals of the pre-amplifying unit, and controls an amplification gain of the pre-amplifying unit based on an output of comparison between an output of the first average detecting circuit and a predetermined reference voltage. The regenerating unit includes a second average detecting circuit that detects an average of input signals to the discriminating circuit, and outputs an output of the second average detecting circuit to the discriminating circuit as a threshold for signal discrimination of the input signal.